

REMARKS

Claims 1-28 are pending in the present application. With entry of this Amendment, Applicant amends claims 1-15, 18 and 21-28. Reexamination and reconsideration of the claims are respectfully requested.

The Examiner rejected claims 1-28 under 35 U.S.C. § 102(b) as being anticipated by Franz et al. (U.S. Patent No. 4,250,788) (hereinafter "Franz").

Franz is directed to a register arrangement for electronic organs. As illustrated in Fig. 1, the musical instrument comprises a tone generator 1 that includes ninety six outputs a1 to a96 for generating a musical tone. The instrument also includes first and second insertable cards 19, 20 which can be removed and inserted in another musical instrument. The Examiner contends these insertable cards disclose the recited extension board. The cards, however, merely contain program data to control the operation of the tone generator 1. That is, all the tone generation of the musical instrument is generated through the tone generator 1 rather than the insertable cards 19, 20.

In contrast, the extension board in one embodiment of the present invention includes a reproducing device for reproducing musical tones. Applicant has amended claim 1 to more clearly recite this feature. Claim 1, as amended, recites an extension board with a "reproducing device" for "reproducing musical tone signals of the prescribed sound pattern in accordance with pattern information". Method claim 21 and medium claim 25 have been similarly amended. Accordingly, Applicant respectfully submits that claim 1, its dependent claims, claim 21 and claim 25 are not anticipated by Franz.

Applicants has also amended claim 9 to recite an extension board with a "reproducing device" for "reproducing musical tone signals of the prescribed sound pattern in accordance with pattern information". Method claim 22 and medium claim 26 have been similarly amended. Applicant therefore respectfully submits that claim 9 and its dependent claims, claim 22 and claim 26 are also not anticipated by Franz.

Claims 15 and 18 both recite that the tone color extension board comprises a sequencer for reproducing sound patterns and a synthesizer for synthesizing second musical tones with expanded tone colors in accordance with the sound patterns. These claims -- as well as their respective dependent claims, method claims 23 and 24 and medium claims 27 and 28 -- are not anticipated by Franz for the same reasons as discussed above.

In view of the foregoing, all of the pending claims in the present application are in condition for allowance. If the Examiner feels that it would advance prosecution, it is respectfully requested that the Examiner telephone the undersigned attorney.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**".

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 393032014800. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

1. (Three Times Amended) A musical tone generation apparatus incorporating a music synthesizer and [operators] an operator, comprising:

a readout device for reading first function setting information from an extension board, wherein the extension board [provides expansion of prescribed elements of musical tones by which sequencer functions are to be executed in connection with the first function setting information] comprises a first storage device for storing pattern information representing a prescribed sound pattern, a second storage device for storing the first function setting information, and a reproducing device for expanding performance information supplied thereto with respect to a prescribed music element based on the first function setting information and for reproducing musical tone signals of the prescribed sound pattern in accordance with the pattern information, and wherein the first function setting information is for setting up reproduction of the musical tone signals of the prescribed tone generation pattern in the reproducing device;

[an incorporator for setting up the sequencer functions] a setting device for initiating the setup for the reproduction of the musical tone signals of the prescribed sound pattern in the reproducing device based on the first function setting information in response to a manual [operations] operation applied to the [operators] operator; and

a [sender] sending device for sending [to the extension board] second function setting information [corresponding to the setup to allow the extension board to execute the sequencer functions], which is provided from the setting device initiating the setup for the reproduction of the musical tone signals of the prescribed sound pattern in the reproducing device, to the extension board.

2. (Three Times Amended) A musical tone generation apparatus according to claim 1, wherein the prescribed music [elements] element is a tone color [correspond to tone colors of the musical tones, and the musical tones are reproduced with expanded tone colors in accordance with sound patterns respectively by executing the sequencer functions].

3. (Three Times Amended) A musical tone generation apparatus according to claim 1, wherein the prescribed sound pattern is an arpeggio pattern [elements correspond to tone colors of the musical tones, and the musical tones are sequentially reproduced with expanded tone colors in accordance with arpeggio patterns respectively by executing the sequencer functions].

4. (Twice Amended) A musical tone generation apparatus according to claim 1 further comprising an I/O interface for interconnection with the extension board, so that the readout device reads the first function setting information from the extension board by way of the I/O interface, and the [sender] sending device sends the second function setting information to the extension board by way of the I/O interface.

5. (Three Times Amended) A musical tone generation apparatus according to claim 1, wherein the [operators are manipulated] operator is operated in a process for setting the prescribed music element being expanded [sequencer functions with regard to the expansion of the prescribed elements of the musical tones by the extension board].

6. (Twice Amended) A musical tone generation apparatus according to claim 2 wherein the extension board [installs] provides a plurality of expanded tone colors, each of which is selectively used for reproduction of [the] musical tone signals of the prescribed sound pattern [tones in accordance with the sound patterns respectively].

7. (Twice Amended) A musical tone generation apparatus according to claim 3 wherein the extension board [installs] provides a plurality of expanded tone colors, each of which is selectively used for reproduction of [the] musical tone signals of [tones in accordance with] the arpeggio pattern [patterns respectively].

8. (Twice Amended) A musical tone generation apparatus according to claim 1 wherein the readout device automatically reads the first function setting information from the extension board in a power-on event.

9. (Three Times Amended) An extension board [installing] installed in a [first] tone generator for generating musical tone signals in response to performance information, comprising:

a storage device for storing pattern information representing a prescribed sound pattern;
and

a reproducing device for expanding performance information supplied from the tone generator with respect to a prescribed music element and for reproducing musical tone signals of the prescribed sound pattern in accordance with the pattern information

[an expander for expanding prescribed elements of musical tones being generated by the first tone generator; and

an executor for executing sequencer functions with regard to expansion of the prescribed elements of the musical tones].

10. (Three Times Amended) An extension board according to claim 9, wherein the prescribed music element is a tone color, so that the reproducing device expands the performance information with respect to the tone color in such a way that the musical tone signals are reproduced using a specific tone color, which differs from an original tone color pre-installed in the tone generator [expander corresponds to a second tone generator, which provides expanded tone colors different from original tone colors pre-installed in the first tone generator, so that the second tone generator generates musical tones with the expanded tone colors by the sequencer functions in accordance with sound patterns respectively].

11. (Three Times Amended) An extension board according to claim 9, wherein the prescribed sound pattern is an arpeggio pattern [expander corresponds to a second tone generator, which provides expanded tone colors different from original tone colors pre-installed in the first tone generator, so that the second tone generator sequentially generates musical tones with the expanded tone colors by the sequencer functions in accordance with arpeggio patterns respectively].

12. (Twice Amended) An extension board according to claim 10, wherein the [expander] reproducing device [provides] secures a plurality of [the] expanded tone colors, each of which is selectively used for reproduction of [the] musical tone signals of the prescribed sound pattern [tones in accordance with the sound patterns respectively].

13. (Twice Amended) An extension board according to claim 11, wherein the [expander] reproducing device [provides] secures a plurality of [the] expanded tone colors, each of which is selectively used for [sequential] reproduction of musical tone signals of [tones in accordance with] the arpeggio pattern [patterns respectively].

14. (Three Times Amended) An extension board according to claim 9, wherein the prescribed music element is an effect, so that the reproducing device sequentially reproduces musical tone signals having the expanded effect at timings being shifted from their original timings [expander corresponds to an effector which provides expanded effects applied to musical tones generated by the first tone generator, and the executor executes the sequence functions in such a manner that the musical tones are sequentially generated with the expanded effects at timings that are shifted from original timings for generation of the musical tones].

15. (Twice Amended) A musical tone generation system comprising:
a musical tone generation device incorporating a first music synthesizer that synthesizes first musical tones with a prescribed tone color in response to key-operation information; and
a tone color extension board installed in the musical tone generation device to provide expansion of the prescribed tone color,
wherein said tone color extension board comprises
a sequencer for reproducing sound patterns in response to [the] key-operation information that is supplied thereto from the musical tone generation device, and
a second music synthesizer that synthesizes second musical tones with expanded tone colors in accordance with the sound patterns respectively, so that the musical tone generation device produces mixture of the first musical tones and the second musical tones.

18. (Twice Amended) A musical tone generation system comprising:
a musical tone generation device incorporating a first music synthesizer that synthesizes first musical tones with a prescribed tone color in response to key-operation information; and
a tone color extension board installed in the musical tone generation device to provide expansion of the prescribed tone color,
wherein said tone color extension board comprises
a sequencer for reproducing arpeggio patterns in response to [the] key-operation information that is supplied thereto from the musical tone generation device, and
a second music synthesizer for sequentially generating second musical tones with expanded tone colors in accordance with the arpeggio patterns respectively, so that the musical tone generation device produces mixture of the first musical tones and the second musical tones.

21. (Three Times Amended) A musical tone generation method comprising the steps of:

reading first function setting information from an extension board, wherein the extension board [provides expansion of prescribed elements of musical tones by which sequencer functions are to be executed in connection with the first function setting information] comprises a first storage device for storing pattern information representing a prescribed sound pattern, a second storage device for storing the first function setting information, and a reproducing device for expanding performance information supplied thereto with respect to a prescribed music element based on the first function setting information and for reproducing musical tone signals of the prescribed sound pattern in accordance with the pattern information, and wherein the first function setting information is for setting up reproduction of the musical tone signals of the prescribed tone generation pattern in the reproducing device;

[setting up the sequencer functions] initiating the setup for the reproduction of the musical tone signals of the prescribed sound pattern in the reproducing device based on the first function setting information in response to a manual operation [operations] applied to an operator [the operators]; and

sending [to the extension board the] second function setting information [corresponding to the setup to allow the extension board to execute sequencer functions], which is provided from the step of initiating the setup for the reproduction of the musical tone signals of the prescribed sound pattern in the reproducing device, to the extension board.

22. (Three Times Amended) A function expanding method comprising the steps of:

storing pattern information representing a prescribed sound pattern in an extension board;
supplying performance information for generating musical tone signals from a tone generator to the extension board;
expanding performance information supplied from the tone generator with respect to a prescribed music element; and
reproducing musical tone signals of the prescribed sound pattern in accordance with the pattern information

[installing by an extension board a first tone generator;
expanding prescribed elements of musical tones being generated by the first tone generator; and
executing sequencer functions with regard to expansion of the prescribed elements of the musical tones].

23. (Twice Amended) A musical tone generation method applicable to a musical tone generation device installing a tone color extension board to provide expansion of a prescribed tone color, said musical tone generation method comprising the steps of:

activating a first music synthesizer of the musical tone generation device to synthesize first musical tones with the prescribed tone color in response to key-operation information;

reproducing sound patterns in response to [the] key-operation information that is supplied thereto from the musical tone generation device;

activating a second music synthesizer of the tone color extension board to synthesize second musical tones with expanded tone colors in accordance with the sound patterns respectively; and

mixing the first musical tones together with the second musical tones to produce mixed musical tones.

24. (Twice Amended) A musical tone generation method applicable to a musical tone generation device installing a tone color extension board to provide expansion of a prescribed tone color, said musical tone generation method comprising the steps of:

activating a first music synthesizer of the musical tone generation device to synthesize first musical tones with the prescribed tone color in response to key-operation information;

reproducing arpeggio patterns in response to [the] key-operation information on the tone color extension board;

activating a second music synthesizer of the tone color extension board to sequentially generate second musical tones with expanded tone colors in accordance with the arpeggio patterns respectively; and

mixing the first musical tones together with the second musical tones to produce mixed musical tones.

25. (Three Times Amended) A machine-readable media storing programs and data that cause a musical tone generation device installing an extension board to perform a musical tone generation method comprising the steps of:

reading first function setting information from the extension board, wherein the extension board [provides expansion of prescribed elements of musical tones by which sequencer functions are to be executed in connection with the first function setting information] comprises a first storage device for storing pattern information representing a prescribed sound pattern, a second storage device for storing the first function setting information, and a reproducing device for expanding performance information supplied thereto with respect to a prescribed music element based on the first function setting information and for reproducing musical tone signals of the prescribed sound pattern in accordance with the pattern information, and wherein the first function setting information is for setting up reproduction of the musical tone signals of the prescribed tone generation pattern in the reproducing device;

[setting up the sequencer functions] initiating the setup for the reproduction of the musical tone signals of the prescribed sound pattern in the reproducing device based on the first function setting information in response to a manual operation [operations] applied to an operator [the operators]; and

sending [to the extension board the] second function setting information [corresponding to the setup to allow the extension board to execute sequencer functions], which is provided from the step of initiating the setup for the reproduction of the musical tone signals of the prescribed sound pattern in the reproducing device, to the extension board.

26. (Three Times Amended) A machine-readable media storing programs and data that cause an extension board [installing] installed in a [first] tone generator to perform a function expanding method comprising the steps of:

storing pattern information representing a prescribed sound pattern in the extension board;

supplying performance information for generating musical tone signals from the tone generator to the extension board;

expanding performance information supplied from the tone generator with respect to a prescribed music element; and

reproducing musical tone signals of the prescribed sound pattern in accordance with the pattern information

[expanding prescribed elements of musical tones being generated by the first tone generator; and

executing sequencer functions with regard to expansion of the prescribed elements of the musical tones].

27. (Twice Amended) A machine-readable media storing programs and data that cause a musical tone generation device installing a tone color extension board to perform a musical tone generation method comprising the steps of:

activating a first music synthesizer of the musical tone generation device to synthesize first musical tones with a prescribed tone color in response to key-operation information;

reproducing sound patterns in response to [the] key-operation information that is supplied thereto from the musical tone generation device;

activating a second music synthesizer of the tone color extension board to synthesize second musical tones with expanded tone colors in accordance with the sound pattern respectively; and

mixing the first musical tones together with the second musical tones to produce mixed musical tones.

28. (Twice Amended) A machine-readable media storing programs and data that cause a musical tone generation device installing a tone color extension board to perform a musical tone generation method comprising the steps of:

activating a first music synthesizer of the musical tone generation device to synthesize first musical tones with a prescribed tone color in response to key-operation information;

reproducing arpeggio patterns in response to [the] key-operation information on the tone color extension board;

activating a second music synthesizer of the tone color extension board to sequentially generate second musical tones with expanded tone colors in accordance with the arpeggio patterns respectively; and

mixing the first musical tones together with the second musical tones to produce mixed musical tones.